RRIFR
Russian River Instream Flow and Restoration

The Biological Opinion: Frequently Asked Questions

What is a "biological opinion"?

A biological opinion is a determination made by a federal agency—in this case the National Marine Fisheries Service (NMFS)—to help restore threatened or endangered species. Biological opinions are prepared when federal government agencies consult with other federal agencies in a process spelled out in Section 7 of the Endangered Species Act.

In essence, biological opinions summarize the studies done during the Section 7 consultation process, analyze the impact of a specific project, and determine whether the project is likely to harm the survival and the recovery of the species. If the biological opinion finds that the species are likely to be harmed by the project, it includes "reasonable and prudent alternatives" that must be implemented. In this case the project is the Russian River Instream Flow and Restoration Project as operated by the U.S. Army Corps of Engineers (Corps) on behalf of the Sonoma County Water Agency (SCWA) and the Mendocino County Russian River Flood Control and Water Conservation Improvement District.

What problem is the Russian River biological opinion trying to solve?

The Russian River and its major tributaries are home to three species of fish that are threatened or endangered: steelhead, coho salmon, and Chinook salmon.

There are many reasons for the decline of these species, including historic overfishing, gravel mining, development near the river and its tributaries, increased sedimentation from logging and historic agricultural practices, and changing climate and ocean conditions. The reasons also include flood control and water supply projects in the river and in Dry Creek. These projects are the sole focus of the biological opinion.

Essentially, the biological opinion addresses the following questions:

Do the flood control projects operated by the Corps and the water supply and flood control projects operated by SCWA threaten to jeopardize the continued existence of steelhead, coho, and Chinook?

If the answer is yes, how can these projects or operations be changed to enable the survival and the recovery of the species? **SECT I, P 1**

What does this biological opinion find?

After more than 10 years of studies (many conducted and paid for by SCWA), NMFS finds that some aspects of flood control and water supply operations threaten to jeopardize steelhead and coho but not Chinook.

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This jeopardy opinion means that SCWA and the Corps must change operations. There are three areas of particular concern:

1. **High summertime flows in the Russian River and Dry Creek** Contrary to what biologists believed in 1986, when the State Water Resources Control Board set minimum summertime Russian River flows in a ruling referred to as Decision 1610, biologists have concluded that fast-moving water in the river and Dry Creek make it difficult for juvenile steelhead, coho, and Chinook to grow and thrive. Reducing flows in the river and improving habitat in Dry Creek for these fish is a major component of the biological opinion. **SECT IV, PP 164–84; SECT X, PP 243–48**
2. **The high velocity of water in Dry Creek in the summer** Fourteen-mile-long Dry Creek is the means by which water from Lake Sonoma gets to the Russian River. As described above, the fast-moving water makes it difficult for young fish to thrive. The biological opinion requires that, over a 15-year period, there be habitat restoration and changes in the configuration of the channel to create slow-moving pools along 6 miles of the creek. **SECT IV, PP 172–77; SECT X, PP 260–67**
3. **The current practice of "breaching" the sandbar at the estuary** Federal biologists believe that breaching negatively affects the estuary (the mouth of the river) by allowing more saltwater than is natural to flow into it and by keeping the amount of freshwater artificially low. The biological opinion requires SCWA to adopt "adaptive management" practices in the estuary, with the goal of keeping the sandbar closed in the summer months to create a freshwater lagoon in which young steelhead can grow. **SECT IV, PP 184–98; SECT X, PP 248–60**

What is a reasonable and prudent alternative?

When a biological opinion finds that current or proposed activities could threaten the continued existence of a threatened or endangered species, it includes steps for public agencies to take to avoid further problems. These steps are called "reasonable and prudent alternatives."

In the case of the Russian River biological opinion, some reasonable and prudent alternatives include the following:

- Reducing summertime flows in the river **SECT X, PP 243–48**
- Restoring 6 miles of habitat in Dry Creek **SECT X, PP 260–66**
- Creating a freshwater lagoon in the estuary during the summer months **SECT X, PP 248–60**
- Carefully monitoring both habitat and fish in Dry Creek, the estuary, and the river **SECT X, PP 258–60, 264–65**
- Eliminating impediments to fish spawning or improving habitat in several streams **SECT X, PP 267–72**
- Enhancing the existing coho broodstock program **SECT X, PP 273–74**

Who is involved?

The National Marine Fisheries Service, the Sonoma County Water Agency, the U.S. Army Corps of Engineers, the Mendocino County Russian River Flood Control and Water Conservation Improvement District, and the California Department of Fish and Game are the agencies involved, with SCWA and the Corps responsible for implementing many of the reasonable and prudent alternatives.

How long will this biological opinion be in effect?

The Russian River biological opinion is a 15-year recovery plan.

What happens if SCWA fails to implement the biological opinion?

SCWA is committed to carrying out the biological opinion, but many of the projects envisioned in later years could change as data becomes available from projects implemented earlier and from the extensive studies and monitoring involved. Think of the biological opinion as a blueprint that can be adjusted by agreement as the situation evolves and new information becomes available.

How much will it cost?

Only a handful of items in the biological opinion include dollar amounts. SCWA and the Corps are calculating the costs of the vast array of projects and are developing a financial plan and a budget for the implementation of the biological opinion. At this point we estimate that the habitat restoration, monitoring, and studies required of SCWA and the Corps will cost up to $100 million over 15 years. **SECT X, PP 267–72, 278**

Who will pay for it?

Funding will likely come from a variety of sources, including ratepayers, state and federal grants, and existing tax revenues that can be designated for this purpose.

Who will make sure it's implemented?

The biological opinion requires that SCWA conduct extensive monitoring and reporting. The data will be provided to NMFS and the California Department of Fish and Game, which will monitor the work.

How can the public get involved?

There are several ways the public can get involved:

- One or more environmental impact reports (EIRs) will be required to change Decision 1610, the ruling that established minimum summer flows. The EIR process includes many public meetings and the opportunity for people to comment.
- The nonprofit Center for Collaborative Policy will interview dozens of community members to determine how changes in river flows, in Dry Creek, and in the estuary could affect them.
- SCWA will hold community meetings to keep residents and businesses updated and to answer questions.

If you are interested in more information about these opportunities, please visit ***www.sonomacountywater.org*** and click the RRIFR link.

What is an estuary? And why is it important to steelhead, coho, and Chinook?

An estuary is where a river meets the sea. The convergence of freshwater from the river and saltwater from the sea creates a dynamic environment that supports a broad diversity of fish, wildlife, and invertebrate and plant species. Estuaries play an important role in the life history of steelhead, coho, and Chinook. Salmon use estuaries to adapt to saline conditions prior to entering the ocean and to adapt to freshwater before migrating upstream to the spawning grounds. Some species, particularly steelhead, spend extended periods of time in estuaries, where the rich availability of invertebrates helps them grow quickly before entering the ocean.

I thought fish need lots of water, so why does the biological opinion require less water in the Russian River?

Biologists have concluded that current flow releases into the Russian River are much higher during the summer than under historic conditions and are too high for optimal habitat for young steelhead, coho, and Chinook. **SECT IV, PP 164–84**

Reducing summer flows in the Russian River would provide better habitat by reducing velocity, would eliminate the need to artificially breach the sandbar at the estuary, and may improve summer habitat in the estuary by allowing the formation of a freshwater lagoon.

Reducing summer flows in the upper Russian River from Lake Mendocino would also retain a greater amount of the cold-water pool behind Coyote Valley Dam, which would be available to be released in the late summer and the early fall, benefiting adult fish returning to the river to spawn.

What is the process for changing the summertime flows in the Russian River?

Summertime flows are controlled by Decision 1610, the ruling that requires minimum flow levels at specified areas of the Russian River and Dry Creek. The minimum flow levels vary, depending on whether the year is "normal," "dry," or "critically dry." (Decision 1610 requires that SCWA release water from Lake Mendocino and Lake Sonoma to maintain these flows regardless of the amount of water that others take from the river and the creek.) **SECT III, PP 15–19**

The biological opinion requires that summertime flows be permanently reduced to replicate river conditions in dry years (although the biological opinion does acknowledge the complexity of operating the system and allows flows to vary). **SECT X, PP 244–48**

To change the flow requirements, SCWA must ask the State Water Resources Control Board to alter Decision 1610. This will require a comprehensive EIR, which could take several years. The state water board will weigh the information provided in the EIR with other factors when making the ultimate decision on summertime flows. In addition, because the biological opinion requires lower flows beginning in 2010, an interim change to Decision 1610 will be necessary; this may require a focused, less comprehensive environmental document. **SECT X, PP 247–48**

Because Dry Creek is the conduit to get Lake Sonoma water to the Russian River, if there is less water in the creek, won't that mean less water for people?

The reasonable and prudent alternatives provide for habitat restoration in Dry Creek. The goal is to naturalize the creek in a way that allows water to continue to flow to meet the current demands of people while creating slow-moving pools and shady areas for young steelhead and coho to grow. **SECT X, PP 260–67**

A threatened Chinook salmon migrating up the Russian River

If less water is needed in the river, would the diversion of Eel River water end?

Pacific Gas & Electric's diversion of Eel River water through the Potter Valley Project is regulated by the Federal Energy Regulatory Commission. These diversions from the Eel River are not controlled by SCWA and will not change as a result of the biological opinion.

Does the biological opinion require a pipeline to be built from Lake Sonoma to the Russian River?

No. The biological opinion does not require the construction of a pipeline. It does require a pipeline feasibility study; and, if habitat restoration projects in Dry Creek are determined to be unsuccessful, in year 10 (2018), the biological opinion requires a change in approach, which could result in additional pipeline studies.

SECT X, PP 264, 272

How will less water in the river affect summertime recreation?

Canoeists, kayakers, swimmers, and people who just like to float down the river in inner tubes—all are an important part of the river culture. The EIR will include in-depth analyses of how lower flows might affect recreation on the river.

What problem in the estuary does the biological opinion attempt to address?

Tidal action builds a sandbar at the mouth of the Russian River that periodically closes the estuary. River water behind the sandbar rises high enough to threaten low-lying property in Jenner and further inland. SCWA holds permits to breach the sandbar to minimize the flooding risk and allow the river to flow freely into the ocean.

Based on studies of coastal lagoons elsewhere in California, some biologists believe that keeping the Russian River estuary closed in the summer would create better conditions for young salmon, particularly steelhead, to grow and thrive.

The biological opinion requires that SCWA adopt adaptive management practices that would keep the estuary closed in the summertime unless flooding is imminent. In the later years of the biological opinion, if the sandbar is repeatedly breached to avoid flooding, SCWA will be required to study alternative solutions to adaptively manage the sandbar, including modifying the existing jetty and elevating homes and other structures in the area to prevent them from flooding. The plan also requires extensive biological, physical, and water-quality monitoring to help determine whether a closed summertime lagoon is better for salmon.

SECT X, PP 248–60

Why doesn't the biological opinion assess impacts on humans?

Under the federal Endangered Species Act, biological opinions must assess the impacts of projects on threatened species, not on humans. The EIR that is required to change minimum summertime flows in the Russian River, however, will assess the impacts on humans, including potential recreational and economic effects.

Shouldn't the biological opinion address all the problems in the watershed?

The purpose of the biological opinion isn't to address *all* problems in the watershed but to address those problems related to specific SCWA and Corps operations.

How does the biological opinion address likely impacts of climate change in our area?

The biological opinion assumes that local impacts from global climate change will be limited and difficult to predict in the next 15 years. The effects of climate change as it relates to lowering the flows in the Russian River will be addressed in the environmental impact report. **SECT I, P 5**

What is an "incidental take statement"?

The federal Endangered Species Act prohibits the "take" (in essence, the killing, harassment, or harm) of threatened species. Agencies can be exempted from take by the regulating agency (in this case NMFS) if species are harmed *incidentally* as an unintentional result of lawful operations. The biological opinion includes an incidental take statement that exempts SCWA and the Corps from take that could result from specified lawful operations and from changes in operations as a result of the biological opinion so long as the terms and conditions of the statement are met. **SECT XI, PP 296–332**

SONOMA COUNTY WATER AGENCY

For more information visit ***www.sonomacountywater.org***.

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